

**WHAT IS CLAIMED IS:**

1. A lithium secondary battery comprising:

a positive electrode formed by coating lithium metal oxides on a positive current collector;

a negative electrode formed by coating carbonaceous materials or SnO<sub>2</sub> on a negative current collector; the negative current collector being made of a Cu-based alloy foil with a thickness of 20  $\mu$ m or less and the Cu-based alloy foil including at least one material selected from the group consisting of nickel, titanium, magnesium, tin, zinc, boron, chromium, manganese, silicone, cobalt, iron, vanadium, aluminum, zirconium, niobium, phosphorous, bismuth, lead, silver, and misch metal

a separator interposed between the positive and negative electrodes;

and

an electrolyte into which the positive and negative electrodes and the separator are immersed.

2. The lithium secondary battery of claim 1 wherein the amount of nickel is 0.8 to 4 wt% of copper, the amount of titanium is 0.2 to 4 wt% of copper, the amount of magnesium is 0.05 to 0.6 wt% of copper, the amount of tin is 0.1 to 2.0 wt% of copper, the amount of zinc is 0.0005 to 0.5 wt% of copper, the amount of boron is 0.0005 to 5.0 wt% of copper, the amount of chromium is 0.0005 to 0.5 wt% of copper, the amount of manganese is 0.1 to 1.0 wt% of copper, the amount of silicone is 0.1 to 0.5 wt% of copper, the amount of iron or cobalt is 0.01 to 2.0 wt% of copper, the amount of vanadium is 0.0005 to 0.5 wt% of copper, the amount of aluminum is 0.005 to 0.5 wt% of

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copper, the amount of zirconium is 0.0005 to 0.5 wt% of copper, the amount of niobium is 0.0005 to 0.5 wt% of copper, the amount of phosphorous is 0.02 to 0.16 wt% of copper, the amount of bismuth is 0.0005 to 0.5 wt% of copper, the amount of lead is 0.0005 to 0.5 wt% of copper, and the amount of silver is 0.0005 to 0.5 wt% of copper.

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